

AUTHOR INDEX

Agladze, T. 607
 Akano, U. G. 367
 Amor, Z. 491
 Asami, K. 343, 349, 355, 401, 727
 Ashworth, V. 293
 Aust, K. T. 551
 Azumi, K. 155, 715

Baba, H. 275
 Bardwell, J. A. 139
 Baroux, B. 447, 585, 591
 Baumgärtner, M. 231
 Ben-Haim, M. 223
 Benzekri, N. 627
 Béranger, G. 585
 Bertocci, U. 471
 Biaggio, S. R. 703
 Biddia, E. D. 703
 Bijimi, D. 305
 Böhni, H. 333
 Bulhoes, L. O. de S. 703
 Burleigh, T. D. 745

Cai, C.-M. 733
 Cao, C.-N. 649
 Carranza, R. M. 563
 Chuah, G. K. 149
 Chen, S.-C. 727
 Cid, M. 491
 Clark, B. E. 551
 Clayton, C. R. 179
 Coddet, C. 313
 Cohen, C. 207
 Cortes, R. 121
 Cottis, R. A. 621

D'Alkaine, C. V. 661
 da Silva, J. M. 661
 Davenport, A. J. 105
 de Wit, J. H. W. 545, 637
 Dean, M. H. 679
 Denpo, K. 459
 Di Quarto, F. 267, 721, 766
 Dobbelaar, J. A. L. 637

Elbiache, A. 207
 Elfenthal, L. 213

Fang, Z. 395
 Fink, J. L. 471
 Frankenthal, R. P. 59, 763, 767
 Freeout, J. L. 53
 Froment, M. 121, 766
 Fujii, E. 655
 Fujii, T. 275
 Fujimoto, S. 643
 Fujishima, A. 733

Furuichi, R.	243
Furuya, K.	527
Gabrielli, C.	129
Galvele, J. R.	563, 763, 766
Gerischer, H.	81
Gerretsen, J. H.	545, 766
Goetz, R.	139
Gorse, D.	591, 685
Graham, M. J.	139, 765
Grasjo, L.	299
Grimal, J. M.	377
Guo, R.	367
Habazaki, H.	343, 349, 355, 401, 727
Hagi, H.	75
Hall, D. E.	471
Hall, S. B.	709
Handa, T.	465
Hansen, G.	213
Hara, M.	691
Hara, N.	197
Haruyama, S.	29, 287, 521, 655, 673
Hashimoto, K.	343, 349, 355, 401, 727, 768
Hayashi, Y.	75
Hazan, J.	313
Heine, B.	533, 573
Heitz, H.	765
Heusler, K. E.	597, 753, 763, 766
Hirano, H.	557
Hofmann, S.	191, 573
Hofsäss	573
Hoppe, H.-W.	167
Hugot-Le Goff, A.	121
Hultquist, G.	149
Huo, S.-Z.	281, 509
Ichinose, H.	249
Inoue, H.	503
Isaacs, H.	105
Itagaki, M.	287
Ito, S.	383
Ives, M. B.	367, 764
Jallerat, N.	539
Janibakhchieva, L.	607
Janik-Czachor, M.	325
Jiang, D.-L.	733
Jiang, X.-C.	319
Joiret, S.	121
Jüttner, K.	679
Kaesche, H.	231
Kajimura, H.	261
Kautek, W.	679
Kawaguchi, T.	249
Kawashima, A.	343, 349, 355, 401, 727
Keddam, M.	129, 313, 627
Kihira, H.	383

Kikuchi, T.	161
Kim, D.	179
Kirchheim, R.	191, 533, 573
Kirchner, P. D.	53
Kobayashi, M.	237
Kohara, K.	579
Kolotyrkin, I.	607
Kolotyrkin, Ya. M.	765
Kruger, J.	111, 767
Kudo, K.	479
Kuron, D.	191
Kurosawa, T.	557
Kutsán, G.	255
Landolt, D.	431, 765
Lemaitre, C.	585
Li, W.-H.	615
Lorenz, W. J.	679
Long, G. G.	111
Lu, Y. C.	367
Lu, YuCheng	179
Lukács, Z.	255
Macdonald, D. D.	223, 425, 667
MacDougall, B.	139
Maeno, M.	69
Marcus, P.	207, 377
Maruhashi, K.	69
Masuko, N.	249
Mathieu, H. J.	431
Matsuda, S.	161
Matsuo, K.	407
Meng, X.-X.	281
Miki, N.	69
Mischler, S.	431
Mitchell, D. F.	139
Miyasaka, A.	99, 459
Miyata, Y.	465
Mizuno, T.	497
Miya, K.	527
Motoda, S.	515
Murata, T.	383
Nagano, H.	261, 765
Nagata, T.	75
Nakagawa, Y.	69
Nakahara, N.	407
Nakahara, Y.	389
Nakano, K.	407
Newman, R. C.	621
Niioka, Y.	237
Nishikata, A.	287
Nishimura, R.	479
Nobe, K.	615
Noda, K.	673
Ogawa, H.	99, 459
Ohmi, T.	69, 389
Ohtsuka, T.	155, 715

Okada, T.	453
Okamoto, G.	527
Okayama, S.	441
Okuyama, M.	521
Olefjord, I.	89
Ono, S.	249
Oversluizen, M.	179
Paatsch, W.	679
Pallix, J.	223
Paola, A. Di	739
Patzelt, T.	213
Pearlstein, A. J.	615
Petit, M. C.	491
Piazza, S.	267, 721
Plieth, W.	697, 765
Puiggali, M.	491
Quang, K. Vu	539
Rauscher, A.	255
Ricker, R. E.	471
Rieger, H.-J.	697
Riviere, J. C.	545
Rondot, B.	591
Sakairi, M.	361
Sato, N.	1, 155, 299, 319, 715
Satoh, F.	389
Satoh, H.	389
Schultze, J. W.	213, 765, 767
Schmaus, D.	207
Schneider, A.	191
Sekine, I.	579
Seo, M.	299, 319
Serruys, Y.	685
Shibata, T.	413, 643, 766
Shinata, Y.	691
Shirkhanzadeh, M.	293
Siemensmeyer, B.	213
Sierradzki, K.	621
Sinohara, T.	515
Smedley, S.	667
Song, Q.	621
Song, S.-Z.	395, 649
Song, W.-M.	395
Srivastava, S. C.	367
Staeble, R. W.	763
Stimming, U.	679
Strehblow, H.-H.	167, 766
Sugano, T.	21
Sugimoto, K.	161, 197
Sunseri, C.	267, 721
Suzuki, Y.	515
Tachibana, K.	527
Takahashi, H.	243
Takaku, H.	557
Takazawa, H.	465

Takenouti, H.	129, 627
Tan, K. L.	149
Tanaka, D. K.	111
Tanno, K.	485
Terada, M.	389
Thietke, J.	213
Thompson, G. E.	293
Thorpe, S. J.	551
Tomari, H.	389
Tomono, K.	407
Tong, R.-T.	733
Torresi, R. M.	563
Tsujikawa, S.	441, 515
Tsuru, T.	287, 361, 655, 673
Urquidi-Macdonald, M.	425
Van Vechten, J. A.	39
Vilche, J. R.	679
Virtanen, S.	333
Vogel, A.	431
Warren, A. C.	53
Wegrelus, L.	89
Weng, D.	509
Willenbruch, R. D.	179
Woodall, J. M.	53
Wright, G. A.	709, 767
Yamakawa, K.	503
Yamaki, M.	243
Yan, Q.	349, 401
Yashiro, H.	485
Yoshioka, H.	349, 401
Yuasa, M.	579
Zhang, B.-P.	355
Zhang, Z.	111

SUBJECT INDEX

A.C. impedance	275, 313
Active dissolution	287, 551, 643
Active-passive	745
Adsorption	585, 497, 607
Ageing	591
Alkaline solution	293
Alloy	600 161
Aluminum	105, 231, 249, 509
Aluminium alloy	621
Amorphous	343, 465
Amorphous Al alloy	349
Amorphous Al-Ti alloy	401
Amorphous alloy	325, 333, 361, 727
Amorphous anodic oxide film	237
Amorphous Cr-Ni-P alloy	355
Amorphous Fe-Cr-P alloys	333
Amorphous Fe-Cr-W-P-C alloy	343
Amorphous titania	407
Anion	607
Anion effect	243
Anodic film	139, 615, 685, 703
Anodic oxide	267
Anodic oxidation	293, 299
Anodic polarization	275
Aperiodic oscillation	615
Aqueous solution	99
Auger	89
Auger analysis	191
Auger electron spectroscopy	557
Austenitic stainless steel	367, 563
Autocatalytic effect	649
Backscattering	207
Band gap	727
Band structure	213
Birth and death stochastic process	413
Borate solution	287, 521, 673
Bound water	479, 527
Brass	563
Breakdown	59, 111, 545
Bromide solution	281
Cadmium sulfide film	597
Carbonate	287
Cathodic current density	515
Cathodic reduction	299, 655
Cerium	105
Channel flow electrode	287
Channeling	207
Chaos	615
Chloride	287
Chloride ion	431, 459, 497, 539
Chloride-pitting	231
Chromate	105
Chromatation	313
Chromium	639, 721
³⁶ Cl-radiotracer	497

- | | |
|--|------------------|
| Co-Cr | 75 |
| Collection efficiency | 627 |
| Compound semiconductor | 53 |
| III-V Compound semiconductor-dielectric | 21 |
| Computer simulation | 621 |
| Conductive film | 709 |
| Contamination | 59 |
| Copper | 287, 293, 299 |
| Copper corrosion | 299 |
| Copper electrode | 319 |
| Copper passivation | 299 |
| Corrosion | 75, 99, 149, 745 |
| Corrosion behavior | 579 |
| Corrosion-free | 69 |
| Corrosion in gases | 753 |
| Corrosion in the active state | 753 |
| Corrosion of passive alloy | 597 |
| Corrosion potential | 557 |
| Corrosion potential fluctuation | 503 |
| Corrosion product | 75 |
| Corrosion rate | 313 |
| Corrosion resistance | 389 |
| Corrosion resistant alloy | 197, 441 |
| Corrosion tunnelling | 231 |
| Cr-enrichment | 576 |
| Crevice corrosion | 441, 459 |
| Crystallization | 249 |
| Current fluctuation | 361, 465 |
| Current noise | 527 |
| | |
| Dangling bond | 39 |
| Deconvolution by the numerical method | 643 |
| Definition of corrosion | 753 |
| Degenerate | 745 |
| Depassivation pH | 459 |
| Depth distribution | 431 |
| Dew point | 389 |
| Diatoms | 515 |
| Diffusion | 585 |
| Dissolution rate | 533 |
| | |
| Electrochemical behavior | 75 |
| Electrochemical impedance | 627 |
| Electrochemical kinetics | 597 |
| Electrochemical measurement | 471 |
| Electrochemical noise | 597 |
| Electrode potential | 515 |
| Electrodeposition | 709 |
| Electrolytic corrosion | 753 |
| Electronic processes | 213 |
| Electronic resistivity | 715 |
| Electronic structure | 81 |
| Electrolytic corrosion | 59 |
| Electropolishing | 389 |
| Electroreflectance effect | 197 |
| Ellipsometry | 161 |
| Environmental condition | 459 |
| ESCA | : see XPS |
| EtOH/H ₂ SO ₄ solution | 579 |

Exchange current	607
Exponential distribution	413
Failure life distribution	413
Fe-Al alloy	573
Fe-Cr alloy	111, 191, 431, 521, 533, 545, 573,
Fe-Cr steel	591
Fe-Cr-Mo alloy	191, 431
Fe-Mo alloy	191
Fe-53Ni	167
γ -Fe ₂ O ₃	655
Field assisted migration	627
Film breakdown	479
Film composition	479
Film formation	533, 643
Film removal	643
Film stability	453
Film thickness	161, 479
Frequency dispersion	313
Frequency domain	503
Fresh surface	607
Fluoridation	69
Future problems of research	753
Galvanic couple	275
Galvanostatic double pulse	313
Galvanostatic transient	649
Gettering	39
Glassy metals	: see amorphous alloys
High alloy material	459
High resolution TEM	249
High temperature	485
High temperature water 557	
History	753
Hopping-motion	661
Hot water	243
H ₂ S	459
Hydrated legand	305
Hydration of aluminum	243
Hydrochloric acid solution	691
Hydrogen	39
Hydrogen peroxide	407
Hydrogen release	509
Hydrogen sulphide	255
Impedance	129, 491, 639
Impedance characteristics	673
Impedance spectroscopy	667
Implantation	213
In situ analysis	197
In situ gravimetry	299
Inconel	377
Induction time	479
Inhibitor	105
Interface	99
Ion beam mixing	395
Ion implantation	367, 395, 649

- | | |
|--------------------------------|---|
| Ion recoiling implantation | 395 |
| Ion selectivity | 479 |
| Impedance | 685 |
| Implantation | 685 |
| Inhibitor | 585 |
| Interface | 99 |
| Interfacial defects | 207 |
| Iron | 129, 139, 155, 497, 551, 655, 661, 673, 715 |
| Iron-chromium | : see Fe-Cr |
| Iron electrode | 319 |
| Iron oxide electrode | 733 |
| Iron whisker | 361 |
| Kinetics | 267, 607 |
| Laser Raman spectroscopy | 383 |
| Lattice image | 249 |
| Lead-acid battery | 709 |
| Lead sulfate | 709 |
| Localized corrosion | 413, 509 |
| Magnetic recording medium | 75 |
| Magnetite | 655 |
| Magneto-optic alloys | 59 |
| Marine corrosion | 509 |
| Mechanism | 479 |
| Mercury contact method | 673 |
| Metabolism | 515 |
| Metal | 149 |
| Metal exchange current density | 313 |
| Mg alloys | 111 |
| MgCl ₂ solution | 503 |
| Model | 425, 639 |
| Modification | 69 |
| Moisture | 59 |
| Moisture release | 389 |
| Molybdenum | 367, 425, 551 |
| Monte Carlo simulation | 413 |
| MOS devices | 21 |
| Mössbauer | 139 |
| NaCl solution | 441, 485 |
| Newly created surface | 643 |
| Ni base alloys | 441 |
| Ni-Cr-Fe alloy | 557 |
| Ni-Cr-Mo alloy | 539 |
| Ni-Mo alloys | 121 |
| Ni-Ti alloys | 727 |
| Nickel | 121, 167, 551, 607 |
| Nickel alloy | 223 |
| Nickel aluminide | 471 |
| Nickel base alloy | 551 |
| Niobium | 267 |
| Nitric acid | 261, 275, 407 |
| Nitride | 39, 179 |
| Noble gas | 39 |
| Noise analysis | 413, 465 |
| Noise phenomenon | 453 |

- Nuclear fuel 275
- Nuclear reaction analysis 207
- $^{18}\text{O}/\text{SIMS}$ 139
- On-line measurement 649
- Optical constant 161
- Optical gap value 407
- Organic film 515
- Outgas-free 69
- Oxidation 149, 389
- Oxide 39, 155,
- Oxide breakdown 139
- Oxide film 249, 319, 557
- Oxide film structure 389
- Oxide growth 139
- Oxidizing ion 275
- Oxygen 149
- Oxygen evolution 261
- Oxygen reduction 521
- Passivation 21, 39, 59, 69, 75, 89, 129, 255,
261, 377, 395, 607, 639
- Passivation kinetics 1, 539
- Passivation potential 527
- Passivation time 527
- Passive film 1, 111, 121, 155, 161, 197, 207,
213, 223, 267, 281, 361, 453, 465,
479, 521, 527, 591, 649, 655, 667,
673, 679, 691, 715, 727, 739
- Passive iron 81
- Passive layer 287, 721
- Passive oxide film 1
- Passivity 167, 179, 275, 325, 333, 343, 355,
447, 471, 545, 585, 597, 621, 643,
661, 733, 739, 753
- Passivity breakdown 1, 333, 355, 413, 425, 491, 563
- pH 459
- Phosphorus 383
- Photocurrent 697, 727, 745
- Photocurrent generation 81
- Photocurrent spectroscopy 759
- Photocurrent spectrum 81
- Photo-effect 267
- Photoelectrochemistry 591, 685, 697, 721, 733, 745
- Photopotential 691, 697
- Photoresponse 733
- Phototransition 697
- Piezoelectric response 319
- Pit initiation 281, 453
- Pit growth 509
- Pit growth kinetics 231
- Pit morphology 231
- Pit nuclei 281
- Pit nucleation 447
- Pitting 281, 349, 361, 465, 471, 509, 551,
649
- Pitting corrosion 191, 367, 395, 447, 453, 485, 497,
585, 597,
- Pitting current 497

- | | |
|---|--------------------|
| Pitting potential | 485 |
| Poisson process | 413 |
| Polarization curve | 261 |
| Polarization resistance | 313 |
| Potential modulated reflection spectroscopy | 197 |
| Potential of zero charge | 319 |
| Potential-pH diagram | 557 |
| Power spectral density | 527 |
| QCM | 129, 299 |
| Quantitative analysis | 89 |
| Quantum yield | 81 |
| Quartz microbalance | 129, 299 |
| Quartz oscillator | 299 |
| Radiation | 213 |
| Radiochemistry | 697 |
| Radioisotope method | 697 |
| Raman spectroscopy | 121, 383 |
| Rare gas | 685 |
| Reaction model | 627 |
| Reduced RDF | 237 |
| Reduction | 545 |
| Reflectivity | 155 |
| RefLEXAFS | 121 |
| Refractive index | 155 |
| Reliability | 21 |
| Repassivation | 333, 465 |
| Repassivation potential | 441, 485 |
| Reprocessing | 275 |
| RDF | 237 |
| Ring-disk electrode | 293, 655 |
| Rotating ring disc electrode | 129 |
| RRDE | 655 |
| Rusting | 383 |
| Rutherford Backscatter Spectroscopy | 367 |
| SALI | 223 |
| Scanning tunneling microscope | 99 |
| SCC | 261, 491, 503, 563 |
| Seawater | 515 |
| Semiconductor | 1, 39, 53, 591 |
| Semiconductor interface | 53 |
| Semiconductor property | 679, 691 |
| Selective dissolution | 573 |
| Selfcatalysis | 509 |
| Si-SiO ₂ | 21 |
| Signal of film breakdown | 503 |
| Signal of repassivation | 503 |
| SIMS | 89, 149 |
| SiO ₂ | 39 |
| Slime | 515 |
| Solubility | 407 |
| Space charge generation | 81 |
| Spontaneous passivation | 349, 401 |
| Sputter-deposition | 349, 401 |
| SRO structure | 237 |
| Stability | 453 |
| Stainless alloy | 465 |

Stainless steel	89, 99, 179, 207, 425, 441, 485, 503, 515, 579, 585, 621, 739
Step response function	643
Stochastic behaviour	447
Stoichiometric	69
Straining electrode	643
Strange attractor	615
Stress corrosion cracking	: see SCC
Structural relaxation	343
Superconductors	59
Surface analysis	325, 573, 727
Surface analysis by laser ionization	223
Surface charge	627
Surface layer	673
Surface stress	597
Sulphuric acid	255
Sulphuric acid solution	527
Sulphur	377
Temperature	255
Titanium	255, 281, 515, 737, 685
Tin sulfide	703
Transient photocurrent	715
Transpassivity	545
Type 304 stainless steel	503, 527
Type 316L stainless steel	389
UPS	167
Vacancy transport	667
Valve metal	275
Video enhanced microscopy	383
Vitrifiability	355
Voltage	59
Water	149
Weathering steel	383
XANES	105
XPS	89, 139, 167, 179, 377, 401, 431, 727
X-ray absorption spectroscopy	111
Zinc	305, 313, 679
Zinc alloy	675
Zirconium	261, 563